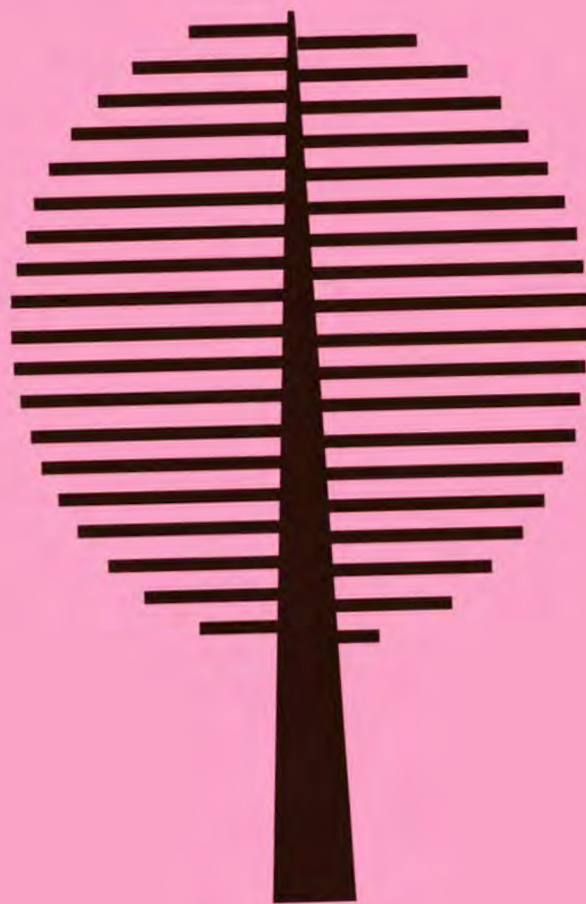


AN APPROACH TO ASSESSING PROGRESS TOWARD SUSTAINABILITY

Tools and Training Series

Assessing Rural Sustainability

A companion booklet to
Planning Action for Rural Sustainability



Sam Chimbuya, Robert Prescott-Allen and
Diana Lee-Smith

May 1997

IUCN
The World Conservation Union

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The booklet is a product of two projects: the project on assessing progress toward sustainability of the World Conservation Union (IUCN) supported by the International Development Research Centre (IDRC); and the project on District Environmental Action Plans (DEAP) of the Government of Zimbabwe, supported by the United Nations Development Programme (UNDP) with technical assistance from IUCN.

This work was carried out with the aid of a grant from the International Development Research Centre, Ottawa, Canada. These publications are one outcome of the project on assessing progress towards sustainability of IUCN (World Conservation Union) supported by IDRC. The project started by bringing together an international working group to discuss the problems of monitoring and evaluating sustainable development. The group soon realised that there was little point in monitoring and evaluating unless one had an idea of where one wanted to go, and that this understanding could best be developed through a questioning approach. A set of methods and tools, including the early drafts of this booklet, were developed and tested in pilot field trials in Colombia, India and Zimbabwe.

Print production of this booklet has been assisted by grants from the International Development Research Centre (IDRC, Canada) and the Swiss Agency for Development Cooperation (SDC).

About the Series

This series of eight volumes has been developed by a cross-disciplinary team for people interested in assessing progress toward sustainability. Despite differences in emphasis, the materials share a common framework and key principles. We suggest that there are four basic linked steps to understanding sustainable and equitable development:

1. Wholeness. People are an inextricable part of the ecosystem: people and the environment need to be treated together as equally important. Interactions among people and between people and the environment are complex and poorly understood. Thus we need start by...
2. Asking questions. We must recognize our ignorance, and ask questions. We cannot assess anything unless we know which questions to ask. To be useful — to help make progress — questions need a context. Therefore we need...
3. Reflective institutions. The context for the questioning approach is institutional: groups of people coming together to question and to learn collectively. The process of reflection will, we suggest, lead inevitably to an approach that is...
4. People-focused. People are both the problem and the solution. Our principal arena for action lies in influencing the motivation for human behaviour.

The series starts with the summary document, *Overview of Methods, Tools and Field Experiences: Assessing Progress Toward Sustainability*. The other seven volumes fall into three sets:

Methods of system assessment (people and the ecosystem)

- Participatory and Reflective Analytical Mapping (PRAM)
- Assessing Rural Sustainability
- Planning Action for Rural Sustainability

Methods of self assessment (for organisations and communities to examine their own attitudes, capacities and experiences)

- Reflective Institutions

Tools (for use in conjunction with any of the methods or with other methods)

- Barometer of Sustainability
- Community-based Indicators
- Questions of Survival

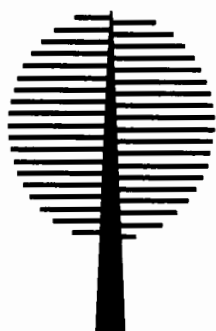
Assessing Rural Sustainability and *Planning Action for Rural Sustainability* are designed to be used together. They can also be used with *Participatory and Reflective Analytical Mapping (PRAM)*, although this is conceived as a separate method. *Barometer of Sustainability* and *Community-based Indicators* may be used with any method of system assessment. *Questions of Survival* may be used with any method of system assessment or self assessment.

Methods and tools may well have to be adapted to local circumstances, and some may not be relevant. Solutions must be people-focused to be sustained. We urge the user, when using these documents, to keep in mind the underlying approach:

- recognize the wholeness of people and the ecosystem together;
- decide which questions to ask before searching for indicators; and
- create opportunities for groups to reflect and learn as institutions.

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Introduction

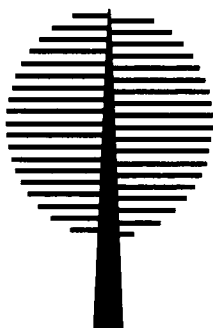
The two companion booklets, *Assessing Rural Sustainability* and *Planning Action for Rural Sustainability*, are designed for use at village level by an outside support team. They are intended to be used in sequence, with assessment leading to action planning.

The method described in these booklets uses and adapts existing Participatory Rural Appraisal (PRA) techniques documented by Robert Chambers, Jules Pretty and others. Previous training and experience in PRA strengthens the use of this method but is not essential.

Two additional booklets, *Barometer of Sustainability* and *Community-based Indicators*, are available as supplementary texts. The former explains the use of the Barometer of Sustainability as a communications and measurement tool. It is used together with *Assessing Rural Sustainability* and *Planning Action for Rural Sustainability*. The latter explains the general purpose and method of developing indicators. It is intended for use with *Planning Action for Rural Sustainability*.

The method described in this booklet is intended to help villagers and field-based teams arrive at a common understanding of ecosystem wellbeing, human wellbeing, the need to improve both together, and the need for action to grow out of this understanding and be based on villagers' own commitments. In each locality the outside team is joined by a local team made up of officials and leaders from the area.

Experience in Zimbabwe, where the method was developed, shows that the steps in the field can be covered in three days with one meeting a day of about five hours each. A lot of information is also gathered during informal discussions when the team spends time with the villagers and taking part in the villagers' daily chores, during meals, on walks, and in casual conversation.



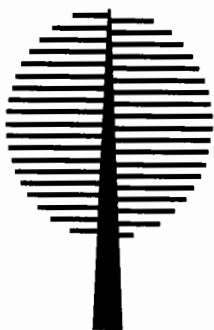
Assembling External Information

External information is information that comes from sources other than the villagers. There are two reasons for collecting it. First, to obtain background information on the ecosystem, the people and the activities of local and external agencies. Second, to expand the knowledge base of the community with useful information in addition to what they already have. The information is given to the villagers, together with the report on the villagers' own assessment, at the start of the action planning phase (see *Planning Action for Rural Sustainability*).

1. Collect external data. Data needed include:

- data on the ecosystem: land capability, soils, hydrology, water potential, biodiversity, land and natural resource uses;
- data on the people: population, ethnicity, health, livelihood, income, housing, settlements, infrastructure, transportation, education, traditional institutions, other institutions, structure of local government;
- data on the activities and investments of local and external agencies: agencies working in the area, and their recent and current programmes, projects and investments (grants and loans). Record grants and loans by programme area and by category (government, financial institutions, donor, private sector, community); and
- sources of the data include: existing maps, satellite imagery, aerial photos, census data, and reports of government agencies, NGOs, schools and clinics in the area, and interviews with members of such bodies.

2. Organise the data. The data need to be easily communicable to the villagers and others so that they can use and integrate the data with their own information. A good way to achieve this is to select the most informative data and put it on maps. The maps can be supported by charts and diagrams and just enough text to explain everything clearly.



Steps Before Going into the Field

Meetings

3. Meet with the head of the local council. Meet with the head of the local council to arrange a meeting with the full council. Describe the concept of the project and what you hope to achieve in both the short and long term. Explain why the project is based on village assessments and planning: the need for action to grow out of a common understanding and be founded on community commitment. Arrange a meeting with the full council, local officials, and NGOs.

4. Meet with the full council, local officials, and NGOs. The purpose of the meeting is to brief local leaders on the project and the assessment and planning process. By the end of the meeting, all present should understand what the project is about and why, and the proposed schedule of activities. Since the local councillors will explain the project and schedule to village leaders, it is particularly important that they clearly understand them. Ask the local councillor (or equivalent local government representative) to arrange a meeting with the elected and traditional village leaders.

5. With the local councillor, meet village leaders. Accompany the local councillor (or equivalent local government representative) to meet the village leaders. Let the councillor explain the purpose and nature of the project and the proposed sequence of assessment and planning activities; and ask for the support of the village leaders. Be ready to help the councillor explain the project. Agree on the nature of the assessment meeting and the days when it will be held (the meeting consists of three sessions over three days). Ask the village leaders and councillor to select the villagers who will host the team members. Ask the councillor the customary way of greeting the traditional leader (if there is one), and follow the custom.

Note: All team members should stay with villagers. This shows solidarity and commitment and provides an opportunity to learn more. Local custom

Steps Before Going into the Field

should be followed in ensuring that staying with villagers does not impose economic hardship on them (for example, bring supplies). Team members should be aware that accommodations may be extremely basic.

Since the meetings will be long (five hours each day), food should be provided. Find out what meal or other refreshments would be usual during the hours when the meetings will be held. Offer to pay for the necessary food and drink for all participants, but ask the villagers to prepare them.

Communication materials

6. Prepare visual aids, questions, and handouts. Three visual aids are used in this method:

- Pyramid of Action (see step 14);
- Egg of Sustainability (see step 15); and
- Barometer of Sustainability (see step 16);

Draw them in advance, translating them into the local language.

The questions in steps 18, 19-20, 21-26 and 29-35 should be written in the local language so that the team is clear on what it is asking and how to ask it. It is useful to have plenty of handouts of all the visual aids (in the local language) to give to people, together with a one-page description of the project.

7. Prepare a record sheet. Prepare a form onto which the recorders (see 9) will put observations, information, and the comments of villagers. The form (which will be several pages) will be easier to use if its organisation follows the steps set out in this booklet.

Preparing the team

8. Prepare and discuss a code of conduct of the team when in villages.

This could include: Remember, you are a facilitator not a teacher. Do not lecture the villagers or argue with them. You are seeking their views, not imposing yours. Do not laugh at a villager making a point in a meeting, even if other villagers laugh at him or her. (Of course, you may laugh if a villager makes a joke or obviously wants you to laugh.) All villagers should feel that you are receptive and respect their opinions and knowledge. All are entitled to speak. If statements are not clear to you or are contradictory or raise questions, ask for clarification. Make sure you understand and have noted what the villagers are saying. However, do not dominate the discussion.

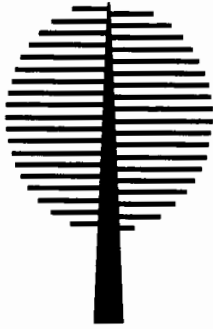
9. Organise the teams. Make sure that each team has a team leader, one or two facilitators, and two recorders. The team leader may be one of the facilitators. The team leader's job is to ensure that all team members fulfil their tasks well and behave appropriately. The facilitators' job is to facilitate villagers' participation when they are meeting in one group (plenary). The recorders' job is to keep a record of the process, noting who takes part, who dominates, and what is being said — word for word as much as possible, not interpreted. The recorders should keep a record of the meetings: start and finish times, numbers attending, and details of all points made by any villager. The recorders are also responsible for labelling (village name, group name or number), numbering and safekeeping every document produced at the meetings (maps, charts, diagrams, lists, etc.). All team members (except the current facilitator) should make back-up notes.

When villagers divide into smaller groups, a team member should be assigned to each group: to provide help and advice if and when asked, and to tactfully and unobtrusively monitor the group's progress. The villagers may be divided into four groups to explore the condition of the ecosystem (see step 21) and six groups to explore the condition of people (see step 29).

Steps Before Going into the Field

To provide a facilitator for each group, the team would need to consist of six people. After the assessment, provide the community with a record of the meeting.

10. Rehearsals. Experience shows rehearsals are essential. Practice steps 11-40 to make sure each team member can do them confidently and well. Team training will take three days.



Setting the Scene in the Village

Orientation

Important notes:

- If villagers want to communicate something in a different or in none of the steps, let them.
- Throughout the meeting, observe: who is in charge? are the village elders given respect? how are they introduced? where do women and men sit?
- Record the time the meeting starts and attendance at the beginning. Record the comments and explanations of villagers throughout.
- Recap with the villagers from time to time to show the villagers you are absorbing what they are saying and to give them a sense of progress through the agenda.
- The formal sessions described in these steps are only part of the assessment. It is vital to use the time before and after the formal sessions — for example, during chores, beer drinking, meals, walks, chatting — to gather information. Conversations with people with special knowledge provide a way of cross-checking information from the meeting. In addition, many people may not speak at the formal sessions. Older people (an invaluable source of historical and traditional knowledge), poor people or minorities may not come to the meeting. Seek every opportunity to meet and talk with them outside formal meeting times in their homes or fields. The best time to meet them is during a casual or planned transect walk in the village (see step 28) or over an evening meal.

11. Village meeting: Allow the villagers to open the meeting in their own local way of opening meetings. Allow them to introduce the village elders and the other village leaders. Let the outside team be introduced to the villagers. The team should observe the local practice for greeting elders and the rest of the villagers. The introductions should answer the questions: who are we? who do they think we are? who are they? who do we think they are? why have we come to the village? what are we going to be doing? how long are we going to be around? how do we hope to cover what we are going to cover?

Setting the Scene in the Village

12. Explanation of project. Explain the project. Outline for the villagers to know why you are there, the purpose of the meeting, and what they can expect down the road.

Developing a Common Understanding

13. River game. Purpose: to show that sustainable development depends on people learning to do things for themselves.

Mark out (on the ground) the river banks and stepping stones across the river, with a larger stone or rock in the middle. Put a table of goodies on the far side. Four people mime the game. Three (persons A, B and C) are villagers: coach them well before the meeting. The fourth (person D) is a member of the team. Persons A, B and C walk up and down the river bank looking for a way to cross. One tries to step in but she/he is afraid. Person D comes along, meets the other three, and listens to their plight. Person D shows them the stepping stones and asks them to cross using the stones. All refuse, and person A jumps on the back of person D. Person D carries person A to the middle of the river. Then goes back to person B. Person D encourages person B to cross the river, showing him/her how. Person D takes person B by the hand. By the time person B reaches the middle, he/she has acquired confidence, and uses the remaining stepping stones to reach the other bank. Person D goes back to person C, who refuses to learn or be carried over. Person D then joins person B. From the island, person A tries to call to persons B and D but they completely ignore his/her calls. Person A tries to go back or to go forward and fails. He/she gives up and sits down on the island looking completely dejected.

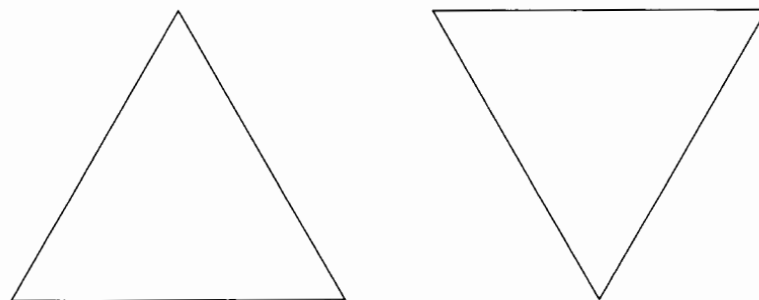
Ask the villages what they saw. Ensure that every in the game has been observed. Afterwards, discuss the game with the villagers. Ask the meaning of

the river, both banks, the table of goodies, the stepping stones, the four persons, and each stage of the game. Throughout the discussion, Person A remains stuck in the middle of the river, until the point is made and you move on to the next step.

The discussion should bring out the fact that the villagers are in a constant search for ways to improve their wellbeing. They know where they want to go. Indeed some communities make it without outside intervention. Outsider intervention is good but this can come in two ways. One way encourages a learning and reflection process which leads to sustainable development. The villager can give examples of projects that failed and the reasons for failure. Explain the nature of the intervention the team is bringing and how the team will work with the villagers for the rest of the time they are in the village.

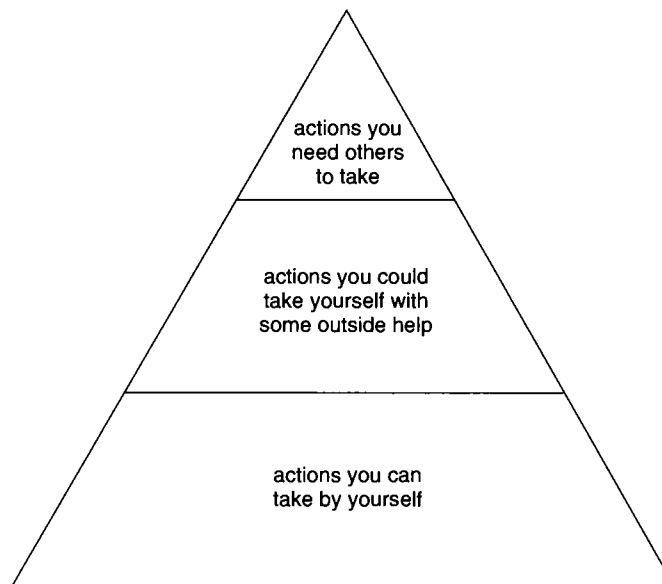
14. Pyramid of Action. Purpose: to start the villagers thinking about what they can do for themselves; and to reduce expectations that the project is merely a way of getting resources from donors.

Start with two triangles presented as objects:



Setting the Scene in the Village

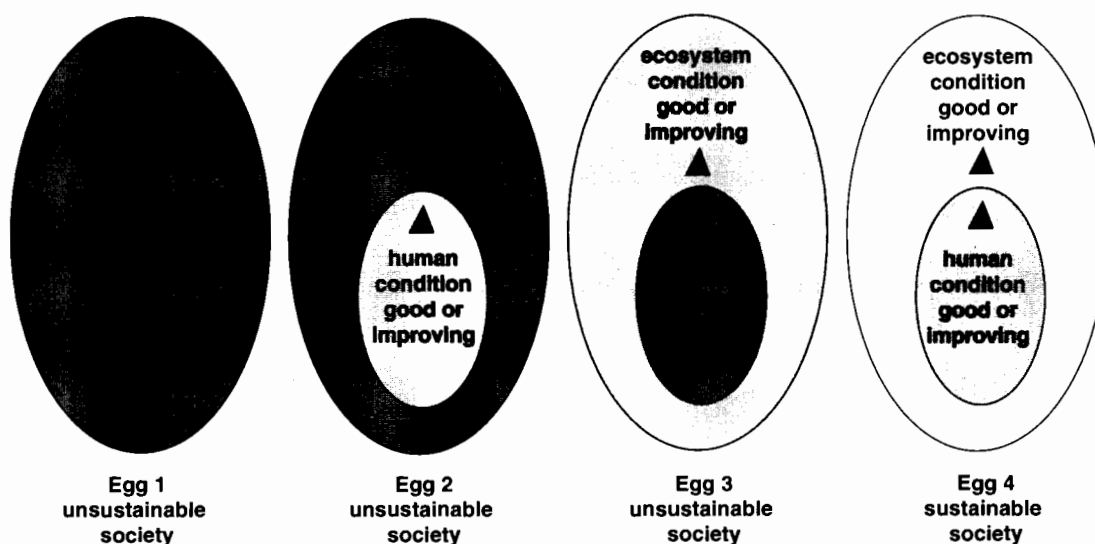
Ask which one is good and why. Write down the villagers' reasons and explanations. After establishing the stability of the pyramid (the triangle on the left), present the pyramid with the words (drawn in advance, e.g., on flip chart paper, using the local language):



Explain what the words mean. State that the purpose of the meeting is for the community and the team to come to a common understanding of the community's situation. State that the purpose of the project is to encourage community action. Support from outside will be useful — and forthcoming — only if it is based on the commitment and actions of the villagers themselves. The actions could include things that the villagers are already doing well, and activities they are committed to doing on their own. State also that the team is seeking an accurate picture of the community's situation, not one that is painted to look particularly bad.

15. Egg of Sustainability. Purpose: to communicate the idea that people are an integral part of the ecosystem and that the wellbeing of both people and the ecosystem need to be improved together.

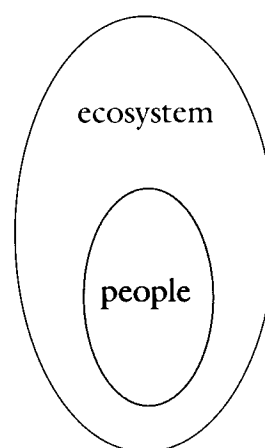
Display and explain the Egg of Sustainability (drawn in advance, e.g., on flip chart paper, using the local language). The illustration here shows four eggs. However, it is better (and truer) to display only one egg, using cut-outs or overlays to demonstrate the three ways the egg can be bad and the one way it can be good. The first egg is completely bad. The second egg is bad because the white (ecosystem) is bad. The third egg is bad because the yolk (human condition) is bad. Only the fourth egg is good, because both the yolk (human condition) and the white (ecosystem condition) are good or improving.



Setting the Scene in the Village

An effective way to get this across is to show one egg with a yellow yolk and a white white:

Then overlay a blue yolk and a pink white. Then remove the blue cut-out so that the yolk is yellow. Then remove the pink cut-out so that the white is white but put back the blue yolk. Then return the egg to its good condition. Ask which egg the villagers want. Write down the villagers' reasons and explanations. When they have chosen the good egg, explain that people are the yolk and the ecosystem is the white. Only when both people and the ecosystem are doing well is the egg (society) sustainable.



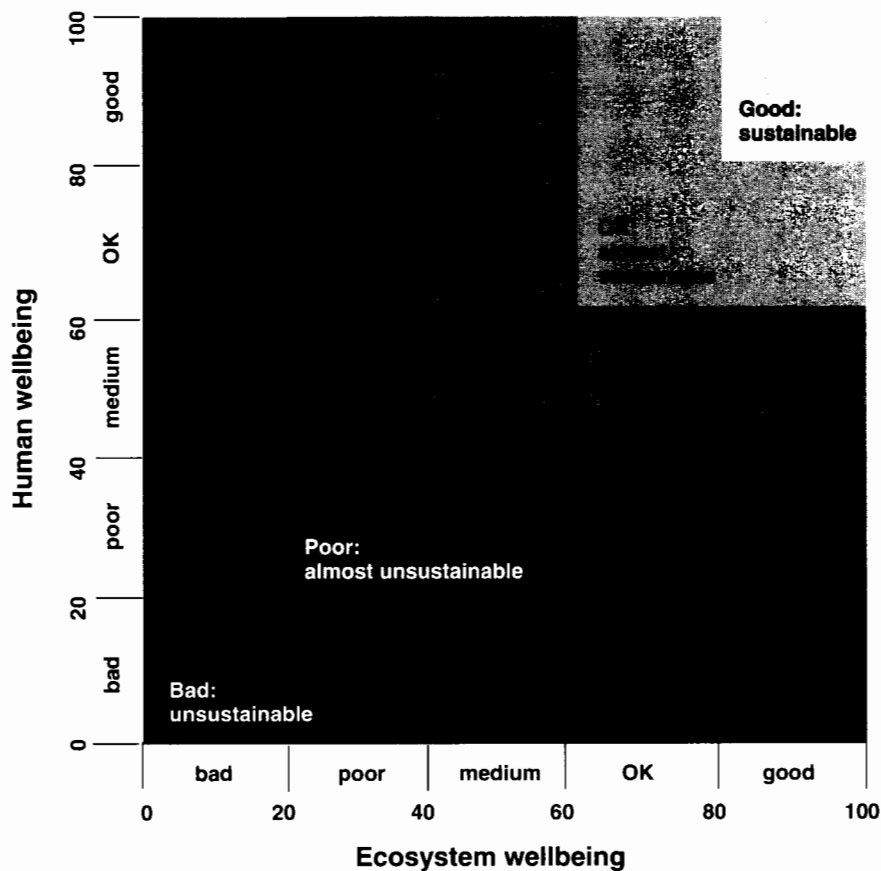
Assessing wellbeing

16. Barometer of Sustainability. Purpose: to provide the community with a tool for measuring human wellbeing and ecosystem wellbeing; and to strengthen the idea of improving both. Have available an already drawn Barometer, although it is probably more effective not to use it right away. In any case, the pre-drawn Barometer should be without words and numbers, since an important part of this is for the villagers to define their own categories and labels for different levels of human and ecosystem wellbeing.

Present the Barometer as a scale for measuring human and ecosystem wellbeing. Draw a simple outline of the Barometer on the spot. Draw the vertical axis and say that it stands for people. Divide the line into five sectors from bottom to top. Mark each with a category of human wellbeing from bad (bottom) to good (top) in the villagers' own language. Ask the villagers to define the categories in their own terms. Discuss the categories with the

villagers to make sure that the team and the villagers have a common understanding of their meaning.

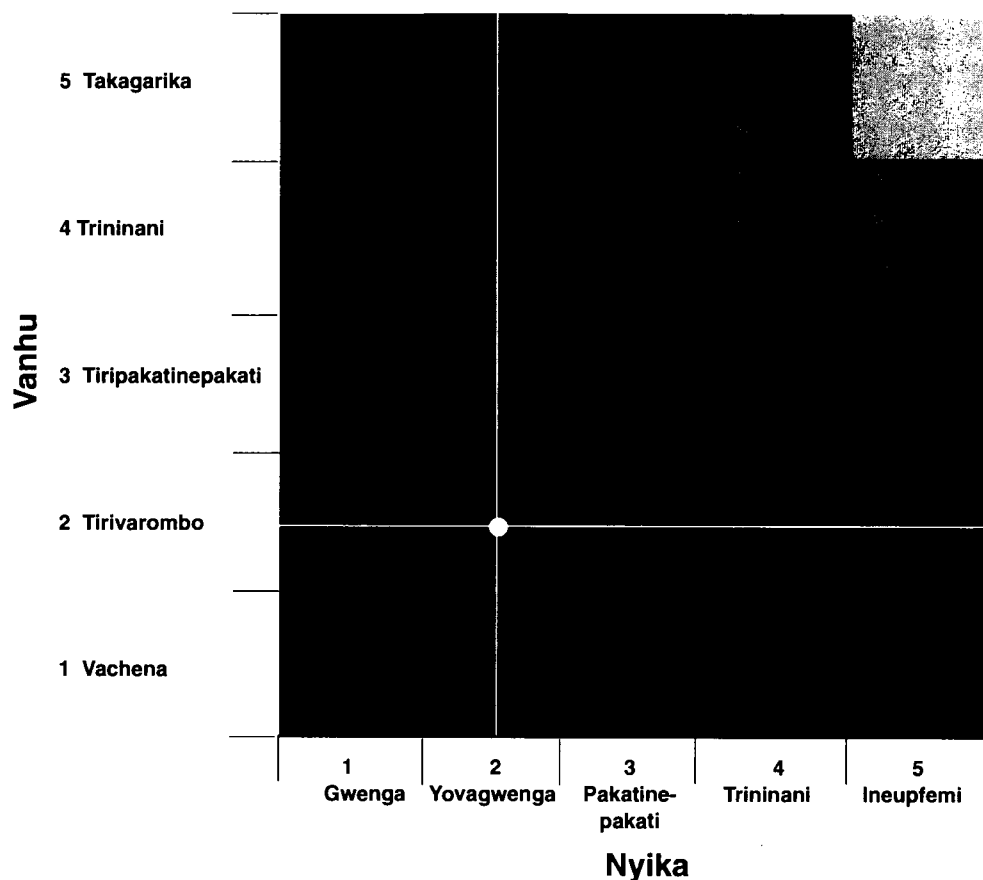
Then draw the horizontal axis and say it stands for the ecosystem. Divide the line into five sectors from left to right. Mark each with a category of ecosystem wellbeing from bad (left) to good (right) in the villagers' own language. Ask the villagers to define the categories in their own terms. Discuss the categories with the villagers to make sure that the team and the villagers have a common understanding of their meaning.



Setting the Scene in the Village

Note: “ecosystem” is broader than “environment” since it includes people and human settlements. Many languages have a word that captures the idea of ecosystem.

An example of the Barometer in Shona (one of the languages of Zimbabwe) is shown below. Vanhu means people; Nyika means ecosystem. A simple numbering system was used (steps 1-5). It was not possible to translate the terms – good, OK, medium, poor, bad — in isolation. Instead the villagers used specific terms, such as a good ecosystem condition, a bad human condition, etc.



17. Initial placement of the community on the Barometer. Ask the villagers where they are on the people scale. Help them to reach agreement. Mark the position on the scale by drawing a line from the middle of the sector concerned from left to right (the line goes between the lines dividing the sectors). If agreement is not possible (for example, women and men or old and young may have irreconcilable opinions), mark all positions on the scale.

Then ask the villagers where their ecosystem is on the ecosystem scale. Help them to reach agreement. Mark the position on the scale by drawing a line from the middle of the sector concerned from bottom to top (the line goes between the lines dividing the sectors). Again, if agreement is not possible, mark all positions on the scale.

The initial placement of the community is where the two lines intersect (as shown on the Shona Barometer on page 14).

Ask the villagers to place themselves where they were on the scale in the past (they should specify the year). This will be explored further when considering trends in steps 20-34.

18. Factors that contribute to human wellbeing and ecosystem wellbeing. Purpose: to obtain a checklist of what factors the villagers think are important for human wellbeing, and what they think are the signs of ecosystem wellbeing. This brings meaning to the Barometer and provides an essential guide to the assessment of ecosystem wellbeing and human wellbeing later on.

Ask the villagers to list the factors they take account of when they consider human wellbeing.

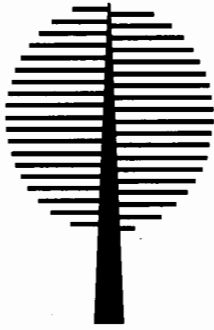
Setting the Scene in the Village

Note: the question is not “Why do you describe yourself as poor?” but “What contributes to human wellbeing?” (food? housing? income? material goods? health? education? family? good local/national government?).

Then ask for a list of the factors that contribute to ecosystem wellbeing, including the signs that the ecosystem is in good condition (or conversely in bad condition).

Use the record sheet to check off what the villagers list and add anything new. If you think anything is missing, prompt the villagers but only once they have finished coming up with their own list. Also list everything on a large sheet of paper for the villagers themselves. This shows that you are taking note of what the villagers are saying.

Make sure the ecosystem factors are covered in steps 19-26, and the human factors are covered in steps 19-20 and 29-35.



Mapping the System

19. System components. Purpose: to arrive at a common view of: a) the main features of the ecosystem and the products and services the villagers obtain from them; and b) human settlement and infrastructure and the location of services. This is necessary for mapping and trends analysis.

Through dialogue (or semi-structured interviewing) find out what the different components of the ecosystem are; for example, forest lands, rivers and wetlands, grazing lands, croplands, mountains, settlements and air.

Then find out the products and services provided by each component, listing them by component. For example:

- forest lands: firewood, building timber, honey, mulch, game meat, wild vegetables, wild fruits;
- grazing lands: grass for livestock, edible insects, small game meat, wild vegetables;
- croplands: crops, garden vegetables; and
- rivers and wetlands: water, fish, thatch grass, rice.

Write the lists in the villagers' language on a large piece of paper. You may suggest additions but they must be clearly marked as your additions.

20. Mapping the system (ecosystem + people) and the changes since settlement. Purpose: to develop a common understanding of the ecosystem and the people within it, and how and why they have changed.

Ask the villagers to show the different components of their ecosystem and society by drawing two maps: one showing the present distribution of the ecosystem components and human infrastructure; the other showing the state of the ecosystem and human infrastructure when it was first settled or as far back as the older people can remember (for example, the 1950s). Human infrastructure includes the locations of:

Mapping the System

- households;
- water points (wells, boreholes, dams);
- roads;
- clinics and other health facilities;
- schools and creches; and
- business centres, stores, grinding mills, butchers, etc.

Mapping is best done by dividing the villagers into groups. It is preferable to group by age or gender, to bring out the different perspectives of male and female, young and old. Alternatively, grouping may be done randomly: for example, giving each person a number (1, 2, 3, etc.), with 1s forming one group, 2s another group, and 3s a third group (more groups, if the meeting is very large).

More people can participate in mapping if the initial drafting is done on the ground (in the dust). Once a group has reached agreement, it can transfer the map to paper. If drawing on the ground is not practicable, or if the villagers want to go straight to paper, participation can be increased by forming smaller groups.

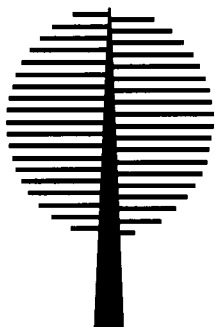
During the drawing of the maps, listen to what the villagers are saying and ask questions about the maps. This will enrich the mapped information. Questions can draw from external data. This will make it easier to link the village assessment data and the external data later on.

When all groups have finished drawing, bring everyone together again. Display the maps of the past system. Ask a representative of each group to explain its map. If there are differences, help the meeting to reach agreement, so that you have a consensus map of the past system. Then do the same with the maps of the present system.

Use the differences between the past system map and present system map to discuss:

- the present state of each component of the ecosystem and human infrastructure
- what has changed in each component of the ecosystem and human infrastructure
- how and why it has changed;
- who has caused the changes;
- who has benefited from the changes; and
- who is suffering due to the changes.

On the list of components, check off those which have changed.



Exploring the Condition of the Ecosystem

Assessing changes

21. Trends analysis. Purpose: to further develop understanding of how and why the ecosystem has changed.

Refer to the list of ecosystem components, and ask the villagers to go back to their groups to analyse the changes they have mapped and associated changes to the ecosystem.

Five kinds of change are likely and should be discussed:

- changes in climate (step 22);
- changes in the area of the ecosystem components (step 23);
- changes in the condition or quality of the ecosystem components (step 24);
- changes in the diversity of plants and animals in the ecosystem components (step 25); and
- changes in the products and services obtained from the ecosystem components (step 26).

Note: This is a lot of work. It may be better not to ask each group to cover all the questions but to assign one question to each group. If so, you will need four groups: one for area, one for condition/quality; one for diversity; and one for products and services. Climate does not need a separate group and can be covered by one of the others.

22. Changes in climate. Ask what are the normal rainfall pattern and season; and the trends in the amount, timing and duration of rainfall — including best and worst years and how years vary. Ask the villagers to construct a seasonal diagram of the rainfall pattern. During the drawing listen and record what they say. At the end let the villagers explain the diagram to the group.

23. Changes in the area of the ecosystem components. Obviously mountains will not have changed in area; but the proportions of the ecosystem occupied by forest lands, rivers and wetlands, grazing lands, and croplands are likely to have changed. The group could use stones or seeds to quantify the changes from the past to the present ecosystem that they have shown on the maps. The ecosystem area on the map would equal 20 stones. The group would show by the number of stones they give to each component — for example, forest lands, wetlands, grazing lands, croplands, and settlements — how much of the total area was occupied by each component in the past. Then they would use 20 stones to show the proportion of the ecosystem covered by each component in the present. A simplified example is shown below. (The number 20 is good because it is small enough for people to grasp but big enough to be divisible into several amounts and so show different proportions. Also, it is easy to convert to a percentage.)

	1955	1995
forest land	●●●●●●●●	●●
fields and gardens	●●●●●●	●●●●●●●●
settlements	●●●	●●●●●●●●

Ask the group to note why the changes have occurred and how people have coped with the changes.

24. Changes in the condition or quality of the ecosystem components. Soil loss, changes in fertility or productivity, pollution, weeds, changes in the average size of trees, siltation, changes from perennial to seasonal rivers — all are examples of changes in the condition or quality of the ecosystem components. Ask the group what can change in each component (i.e., forest lands, rivers and wetlands, grazing lands, croplands, mountains). Then — component by component — ask the group to show any changes and trends in the quality of each ecosystem component in each decade (for example,

Exploring the Condition of the Ecosystem

1950s, 1960s, 1970s, 1980s, 1990s). The group could do this by using scores from 10 to 0. It is essential that the groups define what they mean by 10 and 0 (otherwise the trends are meaningless). For example, if 10 is best and 0 is worst:

- rivers and wetlands: 10 = all rivers and wetlands perennial, no pollution, no siltation; 0 = no rivers or wetlands perennial, all water sources contaminated, all rivers silted; or
- grazing lands: 10 = no erosion, grass supports abundant livestock, no weeds; 0 = erosion widespread, grass supports few livestock, weeds widespread.

Ask the group to note why the changes have occurred and how people have coped with the changes.

25. Changes in the diversity of plants and animals in the ecosystem components. Ask the group to list as many species as possible found in each natural or semi-natural ecosystem component (forest lands, rivers and wetlands, grazing lands, mountains). Let them use their own classification of species. Ask them to indicate: a) any species that was common in the past (same period as the map of the past ecosystem) but is absent or extremely uncommon today; b) any species that was absent or extremely uncommon in the past but is common today; c) any species that has always been rare; and d) any species that was and is still common. Ask the group to note why the changes have occurred.

26. Changes in the products and services obtained from the ecosystem components. In step 19, villagers listed the products and services provided by each ecosystem component. The two main changes of interest are: a) changes in abundance and availability; and b) changes in preferences (leading to changes in use regardless of availability). It is best to ask the group to show these changes separately — and also to show crops and livestock separately from non-agricultural products (wild resources, minerals, etc.).

Preferences and the relative importance of different resources will be covered in the session on the condition of people. The focus here is on availability. Ask the group to show changes in the abundance and availability of :

- a) individual crops and livestock and b) non-agricultural products and services in each decade (for example, 1950s, 1960s, 1970s, 1980s, 1990s), using scores from 10 to 0. Again, it is essential that the group defines what it means by 10 and 0 (otherwise the trends are meaningless). Also, ask the group to note why the changes have occurred, and how people have coped with the changes.

Deepening understanding

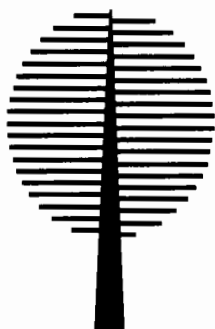
27. Village consensus on group work. When all groups have finished their work, bring the villagers together in plenary. Display the work of the groups. Ask a representative of each group to explain its conclusions. Facilitate a discussion of these conclusions so that the community can reach a consensus on each question. If strong differences emerge that cannot be resolved, record each position.

Note: Use informal conversations to explore questions about the significance and interpretation of the ecosystem changes identified above.

28. Transect walking. Purpose: to gain an overview of the village setting, to observe the condition of the ecosystem, and to reach out to people who did not come to the formal meeting, and talk with them. At the end of the day's meeting, work out on the map of the system the route you would like to take. At least two team members should go together to help each other remember what they see, who they meet, and what they say. The villagers may have an area they would like you to visit, such as one where they have projects. Ask for able-bodied persons to take you on the walk. The group should be small: not more than five or so villagers should take you.

Exploring the Condition of the Ecosystem

On the walk, take every chance to talk about what you see and what is no longer seen (for example, some grass species that have disappeared). Seek every opportunity to talk to the elderly you meet on the way. Stop and hold in-depth discussions with them on the history of the area, including settlement history and the condition of the ecosystem and people in the past. Verify features on the map. Use the information you obtain to clarify or probe further into the information gathered so far.



Exploring the Condition of the People

Assessing conditions

29. Condition and trends analysis. Purpose: to develop a common understanding of the condition of people, and how and why it has changed.

Ask the villagers to go back to their groups to discuss:

- food (step 30);
- income (step 31);
- wealth and infrastructure (step 32);
- health and population (step 33);
- knowledge (step 34); and
- institutions (step 35).

Note: It may be better not to ask each group to cover all the questions but to assign one question to each group. If so, you will need six groups: one for food; one for income; one for wealth; one for health and population; one for knowledge; and one for institutions.

30. Ask questions about food. Three sets of questions are suggested:

i. Sources of food. Ask the group to make two lists: a) a list of sources of food; and b) a list of the foods that come from each source. Then ask the group to use 20 seeds or stones to show how much of their food supply comes from:

- their own crops and livestock;
- wild fruits and vegetables, wild fish and game;
- purchases of locally grown food;
- purchases of non-local food; and
- other sources (e.g., grain loans, free food).

Exploring the Condition of the People

Ask the group to do two versions, one for the past (make sure it specifies when) and one for the present, and to explain any changes.

ii. Most important crops and livestock. Ask the group to list the crops and livestock people grow for food: a) in order of importance for their food supply; and b) in order of preference.

Also, ask them to note and explain changes in a) or b) over the years. Preferences are likely to be different for the young, the women and the men. It is important to capture these differences. If wild foods are important (say, if they account for 10% or more of the food supply), ask the villagers to list them in order of: a) importance; and b) preference, noting and explaining changes over the years.

iii. Seasonality. What is the food supply calendar? Ask the villagers to prepare an activity calendar, showing the months of greatest effort for specific activities (cultivation, sowing and planting, harvesting, obtaining wild foods, etc.).

31. Ask questions about income. Four sets of questions are suggested:

i. Income needs. Ask the group to list in order of importance the things that people need to spend money on. Then ask what is the minimum sum of money required to pay for these things. Make sure the period is specified (for example, per year or per month). Then ask the group to use 20 seeds or stones to show the proportions of the community who:

- have no problem obtaining the minimum sum of money required;
- have a problem but manage to obtain the minimum sum of money required; or
- are unable to obtain the minimum sum of money required.

ii. Main sources of income. Ask the villagers to list their sources of income. Then ask them to use 20 seeds or stones to show the proportions of income from each source, e.g. crops, livestock, employment, crafts, gold panning, etc. Ask the group to do two versions, one for the past (make sure it specifies when) and one for the present, and to explain any changes. Also ask who is involved in each source.

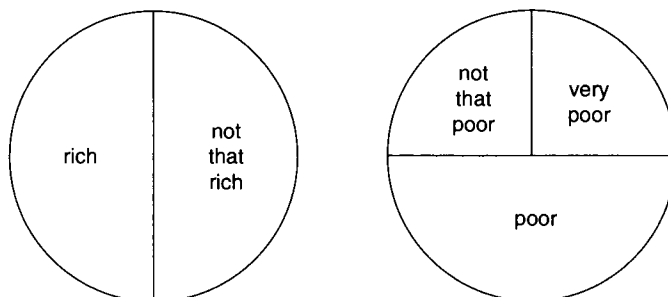
iii. Crops and livestock contributing most income. Ask the villagers to list the crops and livestock in order of importance as sources of income. Also, ask them to note and explain changes over the years.

iv. Seasonality. When do people obtain their income and when do they spend it? Ask for a calendar showing the main months when they obtain income from each of the main sources mentioned in 3 above, and when they spend the income.

32. Ask questions about wealth. Four sets of questions are suggested:

i. Wealth ranking. Draw two circles in the dust. Say that one circle represents the rich and the other the poor. Ask the villagers to use 20 stones or seeds to show the proportion of the rich and the poor in the village (see diagram below). This part is done without asking the villagers to define what they mean by rich and poor. Take the circle representing the rich and ask the villagers if all are equally rich. If not, ask the villagers to divide the seeds into the proportion of the very rich and the not so rich. Do the same with the circle representing the poor. The villagers can create as many categories as they wish. Ask for two versions, one for the past (specify when) and one for the present. Why have any changes occurred?

Exploring the Condition of the People



ii. Components of wealth. How do people define wealth? (This question goes further than food supply and income). Ask for a list of the components of wealth (for example, children, car, cattle). Is the list different from the past (is wealth defined differently)? In what ways?

iii. Defining wealth ranking. Taking the categories of wealth identified in the wealth ranking, ask the group to define the categories in terms of how much of each wealth component the different categories have. The group could make a table somewhat like this:

components of wealth	categories of wealth				
	rich	not that rich	not that poor	poor	very poor

iv. Infrastructure. Explore the adequacy of the water supply (quantity, quality, proportion of households with easy access to clean water, distance and time required to carry water), and adequacy of roads and other infrastructure.

33. Ask questions about health and population. Six sets of questions are suggested:

i. Components of good health. How do the villagers define good health? Ask the group to list the components of good health.

ii. Health status. Ask the villagers to list the diseases and injuries that afflicted them in the past (specifying when) and those that afflict them now — if possible, listing them in order of importance. Ask villagers to use seeds or stones to show the severity and frequency of the diseases on a chart drawn in the dirt.

iii. Health ranking. Ask the group to define health categories (along the lines of the wealth categories in step 32). Ask the group to use 20 stones or seeds to show the proportion of the community which is in each category of health. Ask for two versions, one for the past (specify when) and one for the present. Why have any changes occurred?

iv. Health expertise and facilities. Ask the villagers to list the sources of treatment of disease (for example, old person, herbalist, clinic). Then ask them to say who they first went to for treatment in the past (specifying when) and who they first go to now. Then ask the group if health facilities are adequate. How has their adequacy changed over the years? More specific questions may need to be asked. For example: Is there a well-equipped, well-trained community health worker? How many households are within reasonable distance of a clinic (what do they consider to be a reasonable distance?) and

Exploring the Condition of the People

how many are not? The maps could help this discussion. How many nurses are at the local clinic? Do you know how many are trained and how many are not trained? How often does the doctor come to the clinic?

v. Population. Ask the community for population estimates for each decade, and for an explanation of the changes (migration, changes in family size). Ask for separate estimates of average family size, and migration in and out of the area. Then ask how many children are enough, and how this has changed since the past. (This may have come out already in the wealth analysis.)

vi. Ethnicity. Ask whose land it is. Who were the original settlers of the area? Who are the dominant clans, families or tribes whose customs and traditions are respected and followed? What has changed in the past 40 years? Note that it is often best to explore ethnicity with the elders. Most may not come to the meeting, so at some other time go to where they are and talk to them there.

34. Ask questions about knowledge. Two sets of questions are suggested:

i. Sources of knowledge. Ask the group to list the sources of knowledge that people use to gain their livelihood and solve their problems. They could include: teacher/school, health worker, extension worker, older person, marketplace, newspaper, books, radio, television, tapes. Ask for a pie chart or other way of showing the relative importance of each source. Has the importance of these sources of knowledge changed over the years? Ask for pie charts (or equivalent such as dividing up stones) to show the difference between the past (specifying when) and the present.

ii. Formal education. Ask if all children, most children, some children, or no children of school age go to school. What proportion of girls goes to school? What proportion of boys goes to school? Proportions may be all, most, some, none. Have these proportions changed between past and present (if so, in what ways and why)? Then ask which proportions of the community (all, most, some, none) have: a) no formal education; b) grade seven only; c) four years of secondary school; d) post secondary certificates and diplomas; or e) university degrees.

What educational facilities are adequate? How has their availability and adequacy changed over the years? More specific questions may need to be asked. For example: what proportion of households are within reasonable distance of a school (what do they consider to be a reasonable distance)? The maps could help this discussion.

35. Ask questions about institutions. Three sets of questions are suggested:

i. Main organisations. Which internal and external organisations influence the community? Ask for a list of leadership structures, i.e., the chief's institution, herbalists, women's clubs, young farmers' clubs, non-governmental organisations, natural resources committees, the village development committee, the district council, and government departments.

ii. Distribution of influence and power. Ask in which ways the above organisations influence their lives and how they influence (or could influence) the organisations. Ask people to rank the organisations: a) in order of how much they influence their lives, from very influential to uninfluential; and b) in order of how easy it is for individuals to influence the organisations, from very easy to impossible. For example, they may feel that the local council is fairly influential because it has a moderate amount of power over things that

Exploring the Condition of the People

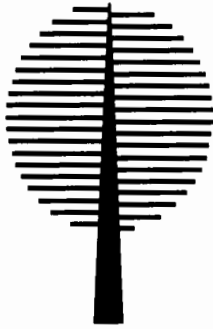
matter to them. And they may feel that they are able to influence the council because they are represented effectively by a dedicated and responsive councillor.

The question is intended to explore people's sense of empowerment. A perspective on this could be provided by asking people where they would put their own family or household in each list. This would show: a) the organisations regarded as more influential than their family or household, and those that are less influential; and b) the organisations regarded as easier to influence than their family or household, and those that are less easy to influence. Be alert for follow-up questions or think up alternative questions.

iii. **Main social and institutional problems.** What were the main social and institutional problems in the past and what are the main ones today? Probe issues that may have come up during the previous discussions, including the factors that contribute to wellbeing (step 18).

36. Village consensus on group work. When all groups have finished their work, bring the villagers together in plenary. Display the work of the groups. Ask a representative of each group to explain its conclusions. Facilitate a discussion of these conclusions so that the community can reach a consensus on each question. If strong differences emerge that cannot be resolved, record each position.

Note: Use informal conversations to explore questions about the significance and interpretation of the human changes identified above.



Preparing for an Action Plan

37. Revisit the Barometer. Purpose: to provide an overview of the conditions of people and the ecosystem; and to show the link between the community's assessment and action.

Display the Barometer of Sustainability again. Ask the villagers to reassess their positions on the human scale and the ecosystem scale, in the light of their assessment of their own condition and the ecosystem condition. They may or may not change their positions. If step 17 produced several different positions, this is an opportunity to try to resolve them, and place the community at a single point on the Barometer. However, if the villagers say that some people are at one point and others are at another point, this should be recorded.

Show that the community could go in any of four possible directions from its current place on the Barometer. It could go backwards, towards the bottom left corner, with both the human condition and ecosystem condition getting worse. It could go up the human scale, improving the human condition but allowing the ecosystem to stay the same or deteriorate further. It could go along the ecosystem scale, improving the ecosystem but doing nothing for human wellbeing. Or it could move toward the top right corner, improving both human wellbeing and ecosystem wellbeing. Only this last direction is the direction of real progress. Ask the villagers in which direction they want to go.

Refer to the Egg of Sustainability as a model for a sustainable society. Note that over the past three days the community and team have developed a common understanding of the community's condition and the condition of the local ecosystem. This was necessary to ensure that any projects really take them in the right direction. Suggest that their position on the Barometer is on one bank of the river (referring to the river game in step 12). Where they want to go (the top right corner) is on the other bank of the river. Projects

Preparing for an Action Plan

are like the stepping stones across the river. Without that common understanding, the stepping stones might go nowhere (human development only or ecosystem conservation only) or even backwards.

38. Revisit the Pyramid of Action. Purpose: to reinforce the importance of community action and commitment.

Remind people that a successful action plan depends on action by the people who will benefit from it. It will be easier to obtain outside support if there is solid evidence that the community is committed to taking action. For example, water management could include catchment protection by the community, provision of a dam and irrigation scheme by outside agencies (national government or donor), and management of water (demarcation and allocation of land) by the community. Without community commitment to protect the catchment and manage water sustainably and fairly, the dam and irrigation scheme would soon be useless.

Note: It may seem repetitive to use the Pyramid of Action twice. But it is important to get the point across both at the beginning of the assessment (step 14) and at the start of action planning.

39. Community action planning. Purpose: to start the community thinking about its own action plan. This is an important bridge to the work covered in the companion booklet, *Planning Action for Rural Sustainability*.

Explore with the villagers what they have done or are doing that contributes to the wellbeing of people and the ecosystem; and what have they done or are doing that has left them worse off. Explore what else they could be doing to improve the wellbeing of people and the ecosystem. Ask the villagers what others have done that has been good for them and the ecosystem, and what others have done that has been bad. If you have time, explore the causes and

effects of past and present actions (causes and effects of problems are also covered in action planning — see *Planning Action for Rural Sustainability*).

Advise the community to form groups or use existing groups to:

- (step 1) identify a few priority issues (problems);
- (step 2) decide the actions they will take to tackle these issues;
- (step 3) consider what additional actions they could take with help (such as training, tools or equipment, seed money) and what help is needed; and
- (step 4) identify what outside support would then be necessary.

Stress that the solutions the community proposes must really solve the problems. Villagers may need to talk more among themselves about the causes of problems, how problems are connected, and what they themselves can do about them.

Also stress the importance of planning action programmes, not isolated projects. For example, a water conservation and management programme (which may include a dam or irrigation project), but not a dam or irrigation project by itself. Only by planning programmatically will the community be able to come up with viable solutions and an appropriate mixture of their own actions and actions by outsiders. State when the team will return to work on the action plan.

40. Extend thanks. Thank the community leaders for organising the meetings, the villagers for participating well and working hard, and the hosts for accommodating team members. Utilise anything else that is the local practice for the closing of village meetings.

Founded in 1948 as the International Union for Conservation of Nature and Natural Resources, the IUCN brings together States, Government agencies and a diverse range of non-governmental organisations in a unique world partnership: over 900 members in all, spread across some 136 countries. As a Union, IUCN seeks to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. The Union builds on the strengths of its members, networks and partners to enhance their capacity and to support global alliances to safeguard natural resources at local, regional and global levels.

The Strategies for Sustainability Programme of IUCN works to strengthen strategic planning, policy and implementation skills aimed at sustainable development at global, national and local levels. Working with networks of strategy practitioners from member governments, partner institutions and NGOs, the Programme assists in the conceptual development and analysis of experience in strategies, the development of a range of strategic planning and action planning skills, and improved methods of assessing human and ecosystem wellbeing.



Publications in this series:

**Assessing Progress Toward Sustainability:
An Overview**

**Participatory and Reflective Analytical
Mapping (PRAM)**

Questions of Survival

Reflective Institutions

Barometer of Sustainability

Assessing Rural Sustainability

Planning Action for Rural Sustainability

Community-based Indicators



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